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Shape of the Australian Curriculum Papers and Consultation Reports

Summary of key aspects to assist future consultation

The National Curriculum Board on 6 May 2009 released reports on its consultation related to the National curriculum shaping paper and the framing papers for the national curriculum in English, mathematics, science and history.

The consultation reports are comprehensive in capturing the key issues that have been raised by a wide range of stakeholders. Data collected from the consultation included written responses and comments at a wide range of forums across Australia. Each report provides a clear response to the issues in terms of the actions to be taken. The actions include amendments to the draft documents where appropriate and in some cases acknowledgement of the issues as key instructions for curriculum writers.

The National Curriculum Board has released amended curriculum documents

The Shape of the Australian Curriculum

The Shape of the Australian Curriculum: English

The Shape of the Australian Curriculum: Mathematics

The Shape of the Australian Curriculum: Science

The Shape of the Australian Curriculum: History.

The consultation report and amendments to the specific curriculum documents show that the National Curriculum Board has listened and responded to concerns and suggestions.

Examples of some key changes:

- In English, there is greater recognition of the inter-relationship of the three English strands (language, literature and literacy)
- In Mathematics greater clarity is provided in relation to the proposed structure and content through the provision of more detail
- In Science, the curriculum structure takes into account the developmental nature of science knowledge and skills and learning about science as a human endeavour in relevant contexts
- In History, the amount of 'required learning' has been reduced and flexibility is increased through the inclusion of comparative options and school-developed options within depth studies.

Feedback related to primary education has been acknowledged and actions proposed. A commitment has been given to further consultation on the implementation issues and timelines for primary years. In addition writers will receive instructions that clarify the primary context, including:

- ensuring that the starting point for the curriculum shows a strong connection with the Early Years Learning Framework

- the need for the primary curriculum to provide the building blocks of learning and as a result each curriculum area must provide appropriate sequencing of knowledge skills and understanding
- recognition of the importance of play in learning
- consideration of other hands-on and practical approaches to learning across curriculum areas
- provide teachers with the flexibility to address student needs eg teachers wishing to include the contestability of history should be able to do so
- recognition of the expectation that primary teachers will deliver new curriculum in the four areas and that they may be supported by the provision of greater explanation and examples of content, concepts and skills
- clear guidance in relation to the allocation of time to learning areas, the opportunity to address the crowded curriculum and how integrated approaches to programming should be supported.

The National Curriculum Board have acknowledged a broad range of feedback relating to issues of equity and diversity. They have undertaken to further examine how the national curriculum will be designed to meet the needs of the full range of student groups, including students with Indigenous backgrounds, with learning difficulties, gifted and talented students and students from non-English speaking backgrounds.

In addition the National Curriculum Board has responded to advice regarding broader cross curriculum areas such as:

- numeracy, literacy, ICT, thinking skills and creativity are to be further developed in all learning areas along with other general capabilities
- cross-curriculum perspectives related to Indigenous education, sustainability and Australia's links with Asia will be represented within and across learning areas.

The National Curriculum Board has selected writers and advisory panels in each curriculum area to undertake the important curriculum writing stage throughout the remainder of 2009. Broad consultation will follow in the first half of 2010. The NSW Board of Studies looks forward to leading the consultation with NSW stakeholders and has established protocols to ensure that the views of key groups and teachers from across the State are well represented.

Implementation of the new curriculum will commence in 2011. Consultation will continue to help inform decisions about the sequence of implementation. Some of the issues noted for consideration in relation to implementation decisions include:

- management issues for primary teachers implementing multiple new curriculum documents.
- the extent of difference between the existing and new curriculum
- additional support that may be required to support State or Territory based credentialing

Summary comments on the revised *Shape of the Australian Curriculum* papers

The documents provide increased clarity in terms of the scope and direction of the curriculum to be developed and address some uncertainties regarding the sequence of learning and the expected standards at the various stages of education.

The National Curriculum Board has indicated in its consultation reports key matters that it will ensure are clear instructions to writers as they commence the task of writing the new curriculum and have appointed expert advisory panels to assist the project.

The NSW Board of Studies has established protocols for consulting with stakeholder groups and individuals to commence on the release of the draft curriculum documents in 2010. The protocols acknowledge the importance of including key groups and the voice of teachers across sectors and geographical regions.

The Board of Studies will collaborate with and support the work of the National Curriculum Board in order to assist the development of high quality curriculum.

English

- The inter-relationship of the English strands (language, literature and literacy) provides a familiar basis for NSW English teachers and could be easily adopted.
- The broadened definition of texts to include written, spoken, multimodal, digital/online texts reflects current NSW thinking.
- An improved and broader definition is used for literature and its function in the curriculum.
- The integration of the strands into every stage is clearly stated and will easily integrate into teaching programs.

Mathematics

- Greater clarity is provided in relation to the proposed structure and content through the provision of examples and greater detail
- The need to extend more mathematically able students in Years 7 to 10 is highlighted as a prime consideration in the development of the curriculum.
- There is a positive commitment to accommodate the diverse range of abilities and needs of students, K–12, in their study of Mathematics.

Science

- The curriculum is appropriately organised in 3 strands:
 - Science understanding
 - Science inquiry skills
 - Science as human endeavour.
- There is recognition through an appropriate structure, of the developmental nature of knowledge and skills and learning about science as a human endeavour in relevant contexts.
- The importance for science in primary years to emphasise hands on activities that engage the learner in meaningful, sequential learning is highlighted.
- Earth and Environmental Science has been included as a course of study in Years 11 and 12 along with the previously proposed disciplines of Physics, Chemistry and Biology.

History

- Students at all levels will gain an understanding of history, beginning with personal and family history in the earliest years, moving to the history of life in past times, places within and beyond Australia, history of important historical personalities, events and developments of national and global significance.

- The nature of historical knowledge and understanding and the process of historical inquiry which underpin the history curriculum have been clearly articulated.
- The interests and capabilities of the learner at various stages of development have been considered in the selection of content, themes and teaching approaches.
- The amount of 'required learning' has been reduced and the inclusion of comparative options and school-developed options within depth studies will provide some flexibility.

Assessment, reporting and achievement standards

- Grades A to E (or equivalent) will be used to report student achievement. NSW teachers, students and parents are familiar with this method of reporting.
- Annotated student work samples will be used to illustrate differences in the quality of student work. NSW teachers currently have annotated work samples aligned to grades on the Assessment Resource Centre (ARC) to assist them in understanding and applying these achievement standards.
- K-10 achievement standards will be described for each year of schooling. NSW currently illustrates achievement standards for English and Mathematics in Years K to 6 for each year of schooling on the ARC. The website is being expanded in 2009 to illustrate achievement standards for each year of schooling for English and Mathematics from Years K to 10.
- The Shape of the Australian Curriculum Consultation Report refers to the participation of the NCB in the current ACACA achievement standards project examining 'consistency of assessment in a number of learning areas K-10.' This reference is included in the report as an 'action for consideration' to address stakeholder feedback. NSW is directly involved in this project.

More detailed comment on English, Mathematics, Science, History and Assessment.

English

General

The 3 Elements of the framing paper are now referred to as strands to be integrated in order to support and inform each other and the student's growing understanding and use of English. The three strands are:

- *Language* – knowing about the English Language and developing students' understanding about how the language works:
 - This will include the teaching of spelling strategies, punctuation conventions, handwriting and word processing skills across all years of schooling.
 - Grammar teaching is to be given attention across all years with a prime focus on using grammatical structures in expressing thought clearly and developing coherence and reason. It is seen as converting 'knowledge about' language into a practical use in effective speaking, listening, reading, writing etc.
 - Students will develop a clear consistent and shared language for talking about language i.e. the consistent development of a metalanguage across the years.
- *Literature* – understanding, appreciating, responding to, analysing and creating literature:

- This includes a broad definition of a literature text – ‘texts of personal, cultural and aesthetic value.’
 - Literature is to be the core element of every stage of the curriculum with skills, knowledge and understandings to be developed coherently and cumulatively.
 - A range of Australian texts and literature will be a part of the Curriculum but the balance with other forms of literature is not defined.
 - Developing student interest in Asia Pacific region literature is also emphasised.
 - Specialised studies of literature in senior years are planned to connect with literary studies at tertiary level.
- *Literacy* – Growing a repertoire of English usage:
 - This involves the ability to understand and produce the English language accurately, fluently, creatively, confidently and effectively in a range of modes including new communications technologies
 - It aims to broaden student knowledge and understanding of English language and to develop efficacy across a range of settings and to put this knowledge to practical and purposeful work.

Positive aspects

- Many of the issues raised regarding the original framing paper for English appear to have been addressed and the revised paper is clearer and more realistic.
- The inter-relationship of the English strands will be appreciated and understood by English teachers and could be easily adopted in NSW where it is common in current practice.
- The broadened definition of texts to include written, spoken, multimodal, digital/online texts is in keeping with current NSW definitions.
- An improved and broader definition is used for literature and its function in the curriculum.
- The integration of the strands into every stage is clearly stated and will be easily integrated into teaching programs.

Some aspects to be monitored

- There is a clearer sense of the role of grammar but more detail is needed about the types of grammar to be used and the intended methodology.
- There is a need to monitor how the strands are connected through processes such as composing and responding.
- References to the active engagement of students in using language and creating texts could be strengthened.
- There is a need to monitor the broader concept of literature and its capacity to capture ideas and insights.
- The links described with other learning areas could be strengthened in the description of the way in which English contributes to the development of knowledge, skills and understanding in other subjects.

Mathematics

General

- The national mathematics curriculum aspires to re-engage the community with mathematics. The paper acknowledges the challenges of creating opportunity for

all students and outlines ‘a starting point from which to develop a curriculum that caters for all students’.

- The mathematics curriculum is to be described by content strands, proficiency strands, numeracy and topics.
- It is proposed that the curriculum be organised around the interaction of three content and four proficiency strands. The three content strands describe the content is to be taught and the four proficiency strands, describe “how” students interact with the content to build proficiency across the range of skills required in mathematics.
- It is intended that more mathematically able students be engaged by using challenges and extensions within available topics.
- The curriculum, compulsory to the end of Year 10 for all students, should enable pathway options to access one or more of the senior years’ mathematics courses.
- There will be four types of courses for Years 11–12 (with further advice for writers about the nature of the curriculum and key considerations in its development):
 - an applied study with a focus on the analysis of everyday work and life problems;
 - a study which provides a suitable pathway to tertiary studies with a moderate demand in mathematics;
 - a study that enables a substantial development of mathematical knowledge suitable for many students, including those intending to study mathematics at university;
 - a study intended for students with a strong interest in mathematics, including those expecting to study mathematics and engineering at university (typically, to be taken in conjunction with the third course type).
- There is a commitment to ensure that all students experience the full mathematics curriculum until the end of Year 10. There is now an opportunity to rethink the curriculum in the early secondary years, including: the need to engage more students; the inclusion of all groups; and the challenge posed by creating opportunity.
- The document states that the curriculum should enable teachers to extend students in more depth in key topics, and that one of the challenges will be to identify the key topics.
- An important consideration in structuring the curriculum is to embed digital technologies so that they are not seen as optional tools. The document states that these approaches allow greater attention to meaning, transfer, connections and applications.
- It is stated that in the senior secondary years, current courses allow appropriate use of computer algebra systems and dynamic geometry, and an option for this will be preserved in the new national mathematics curriculum.
- Other assumptions include that specifying expectations in the four proficiency strands can help in focusing teaching and that reporting to parents or to systems should be based on these expectations for proficiency.
- The pedagogical assumptions made in the document include that: it is preferable for students to study fewer aspects in more depth rather than studying more aspects superficially; content acceleration may not be the best way to extend the best students; teachers can make mathematics inclusive by using engaging experiences that can be differentiated both for students experiencing difficulty and those who can complete the tasks easily.

Positive aspects

- Greater clarity is provided in relation to the proposed structure and content through the provision of examples and greater detail
- The paper acknowledges the need to extend the more mathematically able students in Years 7 to 10 as a prime consideration in the development of the curriculum.
- There is a positive commitment to accommodate the diverse range of abilities and needs of students, K–12, in their study of Mathematics.
- Specific reference to other curriculum areas will be included in the mathematics curriculum, with key numeracy capacities in the descriptions of the other curriculum areas.
- It is intended that the curriculum produced communicates succinctly its important ideas, and reduce some of the crowding by dealing with complementary topics and concepts together.

Some aspects to be monitored

- Specific advice about the allocation of time to the study of mathematics generally, including for years of schooling from Kindergarten to Year 12.
- Further clarification is needed about what is meant by or how all students will experience the full mathematics curriculum until the end of Year 9, with mathematics being compulsory in Year 10, and with schools developing relevant options preserving for all students the possibility of mathematics study in Year 11.
- Further advice and detail is required about how the needs of the most able students in mathematics will be met appropriately, including through extensions within topics, rather than through moving the students on to more advanced topics.
- Further clarification is required about how the suite of courses proposed would cover the range of capacities in mathematics at senior school level and meet the needs of the full range of students.
- For primary students in particular it will be necessary to ensure that the curriculum addresses the concrete before moving to the abstract.

Science

General

- The Science curriculum will be organised in 3 strands across K-12:
 - Science understanding
 - Science inquiry skills
 - Science as human endeavour.
- Years 11-12 courses will be developed in Biology, Chemistry, Physics and Earth and Environmental Science.
- Consideration of appropriate reference to scientific theories and content for strands will be included for writers (*Framing Paper Consultation Report: The Sciences* p16)
 - Science understanding and skills are more clearly organised and outlined.
 - Further alignment between the science inquiry skills and the National Scientific Literacy progress Map
 - There is a progression in the possible content for the 3 strands K-10, including in relation to Human Endeavour. The 'relevant big ideas' have been replaced by a progression of 'unifying ideas'. It is unclear how these will be embedded

in the curriculum and in the structure they appear as a further layer in the curriculum.

- Further advice on incorporating/exemplifying the contemporary contexts will be provided (*Framing Paper Consultation Report: The Sciences* p17)
- The need for collaboration and consultation in the writing of sciences and the geography curriculum is noted.

Positive aspects:

- The curriculum structure recognises the developmental nature across K-10 of the learning of science knowledge and skills and learning about science as a human endeavour in relevant and appropriate contexts
- It recognises that appropriate literacy and numeracy skills must be related to the learning of and about science
- It reflects the importance for students of hands on activities that engage the learner in meaningful, sequential learning, particularly for primary students
- Earth and Environmental Science will be included as a course of study in Years 11 and 12

Some aspects to be monitored

- Further advice is to be provided to writers on describing and articulating the aims and objectives
- The lack of a description of science is of concern in relation to defining the scope of the discipline for schools.
- References that the Australian science curriculum must meet the needs of future engineers, provide a foundation for specific pathways leading to engineering courses and the inclusion of the reference to technology involving the designed world raises questions about the breadth of the content. It will be important that a balance is retained between the centrality of science concepts and skills and the learning of and about science in the human endeavour strand.
- The terms *scientific literacy* and *science capabilities* are not represented in the paper and this is of concern. Clarification will need to be provided along with evidence of how this is to be addressed. Reforms in science education over the last 20 years have included scientific literacy as a key element in providing a dynamic, forward-thinking and futures orientated science curriculum. This is identified in current science education research including the research cited in *Shape of the Australian Curriculum: Science 2.2*.
- A clear statement that defines the scope and intent of technology in the science curriculum is essential. References to technology and contemporary science do not define the terms adequately.
- The content identified in the structure for each stage of the Science Human Endeavour strand will need clarification:
 - The definition of the strand suggests that it looks at the impacts of science and society on each other and considers areas such as history, careers and research, contributions of people and other cultures, uses/applications and implications. Further consideration to providing a clearer definition of technology and the statement 'the union of science, mathematics and technology and design forms 'the scientific endeavour' is needed.
 - Clarification of "moral implications in decision making" about science and its practices is required to ensure that non scientific and non evidence-based teaching of the science are not introduced.

History

General

The *Shape of the Australian Curriculum: History* presents a clear statement of what history is and why it's important for Australian students to undertake the study of history K-12. It maps out required learning at each year of schooling up to Year 10.

The curriculum is based on the interrelationship between historical knowledge, understanding and skills. Many of the issues concerning this relationship that were raised in the original framing paper consultation have been addressed.

The framing paper consultation also showed that there was strong support (93%) for the components of historical understanding proposed in the framing paper and strong support (92%) for the proposed curriculum structure. These elements have been retained and refined.

This has resulted in a national history curriculum that most NSW teachers will be able to accommodate readily with the following emphases for each stage:

- K-2 : students explore their own and their family's history and distinguish between past and present ways of living
- Years 3-6: Life in past times and places with a focus on significant periods, event and personalities within and beyond Australia
- Year 7: History of earliest human communities to end of Ancient History
- Year 8: History from the end of the Ancient period to the beginning of the Modern period.
- Year 9: The Modern World and Australia, 1750 – 1901 (40% Australia)
- Year 10: Australia in the Modern World, 1901 – present (60% Australia).

Positive aspects:

- Students at all levels will gain an understanding of history, beginning with personal and family history in the earliest years, moving to the history of life in past times and places within and beyond Australia to the history of important historical personalities, events and developments of national and global significance.
- The nature of historical knowledge and understanding and the process of historical inquiry which underpin the history curriculum have been clearly articulated. This is of particular importance to those teachers, primary and secondary, who will be required to teach this curriculum but who may not have any training in history.
- The interests and capabilities of the learner at various stages of development have been considered in the selection of content, themes and teaching approaches. There is much more likelihood of student engagement if there is consideration of students' stage of conceptual/intellectual development. For example, the use of four focus questions in Years 3-6 provides an excellent framework to capitalise on students' curiosity and develop their historical skills, knowledge and understanding.
- The amount of 'required learning' has been reduced to a more manageable level and the inclusion of comparative options and school-developed options within depth studies will provide some flexibility. Most NSW history teachers will be familiar with the content and skills and the 'overview and depth' approach to

programming and teaching. Most schools will have a collection of appropriate resources.

Some aspects to be monitored

- The amount of content exceeds what is manageable for the NSW indicative time of 50 hours per year 7 -10.
- While a global approach is evident, especially in Years 7 -10, it will be difficult to accommodate the proposed curriculum while keeping to the 40% and 60% Australian focus mandated in Years 9 and 10 respectively.
- Some of the topics designated for Years 7-10 are part of the current Stage 6 NSW courses and therefore the proposal for senior courses will need to be monitored.
- While this outline will be familiar to many NSW Years 7-10 teachers, NSW will need to monitor the detail, particularly the hours to be allocated, the achievement standards to be reached and, ultimately, the mode of assessment to be used.
- At this stage the history curriculum for Years 11-12 is not clearly defined, apart from the reference to two courses, one in Ancient History and one in Modern History.

Assessment, Reporting and Achievement Standards

General

- Grades A to E (or equivalent) will be used to report student achievement. NSW teachers, students and parents are familiar with this method of reporting.
- Annotated student work samples will be used to illustrate differences in the quality of student work. NSW teachers currently have annotated work samples aligned to grades on the Assessment Resource Centre (ARC) to assist them in understanding achievement standards.
- K-10 achievement standards will be described for each year of schooling. NSW currently illustrates achievement standards for English and Mathematics in Years K to 6 for each year of schooling on the ARC. The website is being expanded in 2009 to illustrate achievement standards for each year of schooling for English and Mathematics from Years K to 10.
- The Shape of the Australian Curriculum Paper Consultation Report refers to the participation of the NCB in the current ACACA achievement standards project examining 'consistency of assessment in a number of learning areas K-10.' This reference is included in the report as an 'action for consideration' to address stakeholder feedback. NSW is directly involved in this project.

Some aspects to be monitored

- The term, *sequence of achievement levels*, is used to refer to the description and illustration of progress in a learning area across K-10. This *sequence* is intended to provide teachers with a 'framework of growth and development in each of the learning areas'. This seems to suggest a developmental continuum approach to achievement standards which would be a new concept for most NSW teachers.
- It is proposed that the 'standard most students might be expected to achieve will be linked to grade C' and that 'students will only achieve grade C or above if they have met the achievement standard for that year/stage.' This implies an expected standard to be met which is a slightly different approach to current practice in NSW but should not present significant difficulties.

- It is specified that annotated work samples 'would be developed for, at least, the A/B and C/D cut-off points'. NSW does not currently provide annotated work samples at cut-off points for Years K-10 although a process for doing this exists and is used in HSC Standards Packages.
- For Years 11 and 12 subject-specific achievement standards will be developed. These will describe a range of levels of achievement expected of students studying a particular course. The form that these will take is not specified but they may be similar in nature to the current Year 10 Course Performance Descriptors or HSC Performance Bands used in NSW.

Comments

The approach to achievement standards described appears to be an attempt to marry a developmental continuum with an A to E grade scale supported by annotated work samples.

The Shape of the Australian Curriculum states that achievement standards 'will provide an expectation of the quality of learning that students should typically demonstrate by a particular point in their schooling' and goes on to clarify that these standards will be described for each year of schooling.

Achievement standards are to be 'feasible, useful and supported by research'. Issues relating to complexity, workload, generic descriptors and professional support are mentioned in the Consultation Report as areas for consideration suggested by stakeholder feedback.

It is stated that formative assessment will continue to be used by teachers to diagnose learning difficulties or to inform future teaching and learning but little else on assessment is mentioned.

NAPLAN tests are to be informed by literacy and numeracy continua developed for national curriculum and linked to achievement standards. It will be possible to 'calibrate' results of assessment programs against the sequence of achievement levels and thus to 'provide finer grained detail about students' levels of achievement and progress that can be useful for monitoring purposes at the system and whole-school levels.'

Achievement standards for general capabilities will be explicitly dealt with in each subject area.

The Consultation Report indicates that in order to 'provide greater clarity and more detailed advice a separate paper is to be developed on achievement standards. This paper will be released in April/May 2009'. This document is not yet available on the NCB website.

